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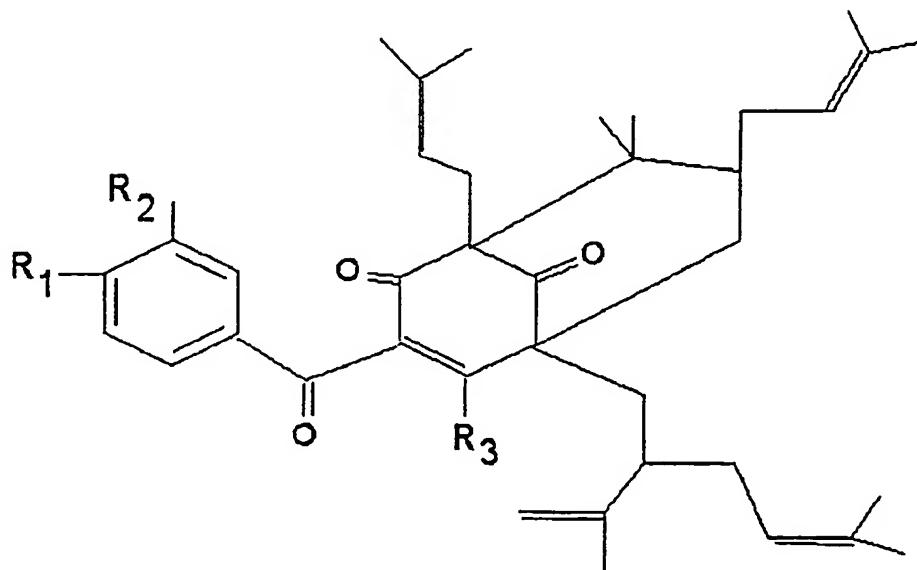
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(54) Title: POLYISOPRENYL BENZOPHENONES AS INHIBITORS OF HISTONE ACETYL TRANSFERASES AND USES THEREOF



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(57) Abstract: In this patent we describe the purification of prenylated benzophenones from the fruit rinds of *Garcinia* species and its evaluation as an inhibitor for Histone acetyltransferases p300 and PCAF. We have found that prenylated benzophenones are potent HAT inhibitors of p300 ( $IC_{50}$ -1 $\mu$ M) and PCAF ( $IC_{50}$ -15 $\mu$ M). The inhibitors significantly repress the p300 HAT dependent transcriptional activation from *in vitro* assembled chromatin template but had no effect on transcription from DNA. These results suggest that the compounds could be specific to HATs. Thus these compounds should be useful as biological switching molecule for evaluating the role of p300 and PCAF in cellular functions and may be useful as new chemical entities for the development of anticancer drugs.

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